

CHAPTER 9. RESTRICTED CATEGORY AGRICULTURAL AIRPLANES

1. OBJECTIVE. This chapter contains general information concerning Title 14 of the Code of Federal Regulations (14 CFR) part 137 Agricultural Aircraft Operations.

3. DEFINITIONS.

A. Spreader. Systems attached to the fixed points of the airplane, under the hopper, which dispense dry agricultural chemicals and seed.

NOTE: The spreader includes its associated gatebox.

B. Hopper. Container within the airplane structure to hold the aerially dispensed products.

C. Spray Boom. Length of pipe or tubing of variable size or shape, depending upon the system and the particular application.

5. CIVIL AIR REGULATIONS (CAR)/CIVIL AERONAUTICS MANUAL (CAM) 8. Pertinent parts of the preamble to CAR/CAM 8 state that the CARs provide for the type and airworthiness certification of aircraft built or modified for special purposes (i.e., crop dusting, seeding, and spraying). As stated in the preamble to CAR 8, the requirements in effect at the time established an appropriate level of safety for passenger-carrying aircraft, but imposed an unnecessary economic burden and were unduly restrictive for the manufacture and operation of small agricultural aircraft. These aircraft are intended for use in rural, sparsely settled areas outside the usual lanes of air transportation. For restricted category operations, where public safety is not in danger, it appears unreasonable to require the same level of safety as that required for passenger-carrying aircraft. Therefore, a change to CAR/CAM 8 eliminated the “equivalent level of safety” provision for restricted category aircraft. It should be noted that nothing in CAR 8 was intended to contradict the statutory requirement that the Administrator must find that the airplane is of proper design, material specifications, construction, and performance for safe operation. CAR 8 is intended to provide the greatest possible flexibility of administration, and to place the minimum possible burden consistent with public safety on the applicant for certification in the restricted category.

NOTE: The part of CAR 8 which provided the procedures for the type certification of restricted category aircraft was recodified as 14 CFR part 21, § 21.25. That section currently provides type certification procedures for restricted category airplanes.

A. Small Agricultural Airplanes. Advisory Circular (AC) 20-33, Technical Information Regarding Civil Aeronautics Manuals 1, 3, 4a, 4b, 5, 6, 7, 8, 9, 13, and 14, as amended, states that CAM 8 may be used in conjunction with part 21, §§ 21.25, 21.185, and 21.187 for restricted category certification of small agricultural airplanes only. The material in CAM 8 may only be used for small agricultural airplanes in the following situations:

(1) For alterations made to small airplanes originally type-certificated under CAR 8. The guidance materials in CAM 8 are applicable, but only for those alterations where the CAM 8 guidance material is appropriate.

(2) For alterations made to small airplanes originally type-certificated under 14 CFR parts 21 and 23. The material in CAM 8 may be used as guidance material to assist in showing compliance with part 23, but only for those alterations where the CAM 8 material is appropriate and is not in conflict with the intent of part 23 requirements.

NOTE: The term “appropriate,” when used in discussing requirements, means those requirements address a specific feature of a type design, and can be used to evaluate the safety aspect of that feature.

B. Gross Weight Increases. CAM 8 sets forth acceptable procedures and practices for guidance, including Appendixes A and B, for those airplanes which were certificated under CAR 8. Guidance in Federal Aviation Administration (FAA) Order 8130.2, Airworthiness Certification of Aircraft and Related Approvals, as amended, states that the use of CAM 8 in approving gross weight increases has only been appropriate for airplanes if CAR 8 was used as part of the certification basis. For airplanes certificated under parts 21 and 23, CAM 8 may be considered to contain acceptable methods of complying with the regulations

as the basis for a field approval, if the information is not contrary to the airplane's certification basis or the manufacturer's requirements.

C. Alterations. Alterations approved for an airplane can be installed on other airplanes of the same make and model, provided:

(1) The airplanes are owned by the individual that originally obtained the approval.

(2) The installer finds that the alteration does not interfere with any previously-approved alteration on that specific airplane.

NOTE: Subsequent alterations will be considered minor alterations when performed by the owner on his or her own aircraft. The owner must remove this system when the aircraft is sold or transferred and an appropriate entry must be made in the aircraft's records.

D. Spreader and Spray Boom Systems Installation and Removal. The initial installation of either a spreader or spray boom is considered a major change and requires FAA approval. That approval can be attained as part of the original type certificate (TC), an amended TC, a supplemental type certificate (STC), or a field approval. Spreader and spray boom systems removal and installation are not addressed in CAM 8 or in the 14 CFR part 43 appendixes. Once FAA approval has been obtained for more than one configuration, changing from one configuration to another is a service requirement; therefore, it does not constitute maintenance and does not require record entries. However, these system changes or reconfigurations should not include changes to structural attachments or the permanently installed equipment of the airplane.

E. Changing from One Configuration to Another. Changing from one configuration to another can be accomplished by the operator as long as it is done in accordance with conversion instructions covering the installation and removal of the components or equipment. These instructions are normally prepared during original approval of the installation, but must be developed by the operator if not accomplished at that time. The operator is also responsible for properly training those persons servicing the aircraft.

7. FIELD APPROVALS. The inspector should consider alterations to agricultural aircraft that require FAA approval on an individual basis. The inspector should consider the following information:

A. Acceptability of CAM 8. CAM 8 is acceptable only when the requirements are appropriate for alterations of small agricultural airplanes that used CAR 8 as the original certification basis. The CAM 8 and its appendixes A and B should be referenced by specific application to the requested modification. The CAM 8 guidance, along with any pertinent data, can be used to complete the field approval process.

NOTE: The guidance material in CAM 8 may be used to assist in showing compliance with part 23 for small agricultural airplanes only, but only when the guidance material is not in conflict with the requirements of part 23.

B. Eligibility Exceptions. Conversion from reciprocating to turbine/turboprop engines is not allowed under the field approval process.

9. RECORDKEEPING. With regard to all references to Form ACA 337 (now FAA Form 337) stated in the CAM 8, the standard procedures outlined in AC 43-9, Maintenance Records, as amended, should be used to fill out FAA Form 337. Other information, such as flight test and weight and balance, will be recorded in the aircraft maintenance records.